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American Public University System

The Ultimate Advantage is an Educated Mind

School of Security and Global Studies
Prefix421
Signals Intelligence and Security
Credit Hours: 3
Length of Course: 8 Weeks
Prerequisite: NONE

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Instructor Information

Instructor: [insert name with credentials]

Biography: [insert APUS biography link]

Please contact your instructor through the Messages tab in the classroom.

After the class is over, instructor contact information: [insert mycampus address]

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Course Description (Catalog)

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INTL 421 – Signals Intelligence and Security (3 hours)

This course examines Signals Intelligence (SIGINT). It covers the various methods and modes of collection, analysis, and use of strategic and operational level communications intelligence (COMINT) and electronics intelligence (ELINT). The course also reviews the security means available to protect friendly communications and electronic emissions.

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Course Scope

As a 400-level course, this course provides a higher level of knowledge building on the material taught at the 300 level. The purpose and scope of this course is to enable the student to build a deeper understanding of the discipline.

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Course Objectives

After successfully completing this course, you will be able to:

CO-1 Analyze the history of signals intelligence in the United States and its role in national security and defense situations.

CO-2 Evaluate the collections platforms within Signals Intelligence.

CO-3 Interpret the doctrinal employment of SIGINT in Europe during the Cold War.

CO-4 Explain the role of Communications Security in protecting US communications from foreign exploitations.

CO-5 Examine the application of Signals Intelligence against current and future threats: state and sub-state terrorists, economic challenges, traditional nation-state threats.

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Course Delivery Method

This course, delivered via distance learning, will enable students to complete academic work in a flexible manner, completely online. Course resources and access to an online learning management system will be available to each student. Online assignments are due by Sunday at 11:55 pm ET and include all written assignments, examinations, and research papers submitted for grading. Weekly Forum questions (accomplished in groups in a Forum) require an initial response by Thursday at 11:55 pm ET, with all other required responses due by Sunday at 11:55 pm ET. The assigned faculty will support the students throughout this eight-week course.

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Course Resources

- Required Course Textbook

The **required** text for this course is: There are no text books for this course. You can find a detailed list of all required reading and turn-ins for each week by clicking on Lessons, the Weekly Lesson module, and then the Assignment tab.

- External websites and other assigned reading found in the Lessons area of the classroom.
- Weekly Lesson Notes and videos or audio files are found in the Lessons area of the classroom.

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Evaluation Procedures

Forum discussions – 25 percent

Each week, a discussion question is provided and posts should reflect an assimilation of the readings. Students are required to provide a substantive initial post by Thursday at 11:55 pm ET and respond to 2 or more classmates by Sunday 11:55 pm ET. Forum posts are graded on timeliness,

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relevance, knowledge of the weekly readings, and the quality of original ideas.

Lab Assignment: - 25 percent

This lab we'll look at a typical SIGINT collection setup. You'll access a receiver remotely via the web and listen to signals typical of the HF spectrum. *This assignment addresses CO 1 and 2*

Midterm assignment - 25 percent

A six-page essay. Specific instructions found in Assignments tab of the classroom. *This midterm essay is a paper that addresses CO 1 and 2. The essay instruction is: In this 6 page essay you are to analyze and evaluate the collections platforms used in SIGINT and its past, current, and future role in national security.*

Progress assignment - 25 percent

Specialized Exercise. 8-10 pages including research and analysis. *This essay assignment addresses the issues in CO 1-5*

Final assignment – 25 percent

A six-page essay. Specific instructions found in Assignments tab of the classroom. *The six page essay assignment is actually two questions answered in 3 to 4 pages each and each addresses the issue in CO 3,4, and 5, respectively.*

Grade Instruments	Percentage
Forum Discussions (8)	25
Lab	10
Midterm Assignment	20
Progress Assignment	20
Final Assignment	25
Total	100

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8 – Week Course Outline

<u>Week</u>	<u>Topic(s)</u>	<u>Course Objective(s)</u>	<u>Reading(s)</u>	<u>Assignment(s)</u>
1	Introduction and Historical Highlights	CO-1 Analyze the history of signals intelligence in the United States and its role in national security and defense situations.	Author, Title *Importance of Signals Intel. * National Security Agency and the Cold War *Venona Story Orientation and History *NSA 50 th Anniversary *Zimmerman Telegram *Zimmerman Telegram 2	Forum Post 1: What is SIGINT and What can we learn from Venona?
2	Signal Collection		*ELINT *NSA *The TRS Program *Directive 9 *Early Development of COMINT *Wiebes, Chapter 2 *Bamford, Chapter 7	Forum Post 2 Choose from COMINT, TELINT, ELINT or RADINT to explain its function and its limitations. Lab: In this lab we'll look at a typical SIGINT collection setup. You'll access a receiver remotely via the web and listen to some signals typical of the HF spectrum.

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		<p>CO-2 Evaluate the various collections platforms within Signals Intelligence. (Combination of CO2 and CO5)</p>		
3	COMINT	<p>CO3 – Interpret the doctrinal employment of SIGINT in Europe during the Cold War.</p>	<p>*Rochefort *El Alamein Cuban Missile Crisis 1 *Cuban Missile Crisis 2 *Operation Ivy Bells *Operation Starlight *Video – Cuban Missile Crisis</p>	<p>Forum Post 3: Discuss the Cuban Missile Crisis and the failure of NSA.</p> <p>Video: http://www.youtube.com/watch?v=lg8UdfQKXSY</p>
4	COMINT II	<p>CO3 Interpret the doctrinal employment of</p>	<p>*Background of ELINT *NSA – The Venona Story *Bamford Chapter 9</p>	<p>Forum Post 4: Missile Gap. Discuss the role of the Corona Satellite program and its technology Midterm Assignment: Answer TWO of the following THREE essay questions. (1)What can be done to avoid communications intelligence failures in the future?</p>

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		SIGINT in Europe during the Cold War.	*Gilbert, 33-43, 49-68 NSA- Pusan	(2) Discuss the differences in tasking, collection, and usage of SIGINT between the British and Germans during the Cold War. (3) Why did the Europeans and Americans share SIGINT, and how important were these agreements during the Cold War?
5	ELINT and FISINT	CO4 Evaluate the role of Electronics Intelligence as a Signals Intelligence tool and its impact on strategic and tactical military problems, including the problem of protecting US electronic signals from foreign exploitation.	*Background of ELINT *Corona NRO *Corona Revolution *Missile Gap Book, CIA *Week 5 Case Study *DEFSMAC Brochure	Forum Post 5: Please address one of the two topics listed below. When responding to other student postings, please respond to the topic you did NOT chose for your initial posting. You should reply to at least two other student postings: 1) What is the process by which foreign radar systems can be defeated through the employment of ELINT? Describe the process from tasking through to operational orders to defeat the radar system. Provide your original contribution in response to the topic. Reply thoughtfully and constructively to at least 2 other student submissions. -or- 2) Is it possible to fully protect electronic systems and use of the electromagnetic spectrum from foreign exploitation? Why or why not? Provide your original contribution in response to the topic. Reply thoughtfully and constructively to at least 2 other student submissions.
6	COMSEC		*Communications Security	Forum Post 6: Please respond to one of the two topics listed below. In addition to your original posting, please reply thoughtfully to at least two

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		<p>CO4</p> <p>Analyze the role of Communications Security in protecting US communications from foreign exploitations.</p>	<p>*Case Study Manchuria</p> <p>*Zimmerman Telegram 1</p> <p>*Zimmerman Telegram 2</p>	<p>other students. Here are your topics:</p> <p>1) Analyze the potential for SIGINT against al-Qaeda. Identify at least three types of targets, associated collection mechanisms, and expected intelligence "take" from these collection mechanisms.</p> <p>-or-</p> <p>2) How will Signals Intelligence be used in the 21st Century? Identify a principle nation-state target for SIGINT collection and discuss the potential role for SIGINT in strategic and tactical intelligence collection.</p> <p>Week 6 – Progress Assignment -8 to 10 pages.</p>
<p>7</p>	<p>SIGINT in the 21st Century</p>	<p>CO1-5</p>	<p>*Wiebes, Chapter 10</p> <p>*Intelligence in the 21st Century</p>	<p>Forum Post 7:</p> <p>Please respond to one of the two topics listed below. In addition to your original posting, please reply thoughtfully to at least two other students. Here are your topics:</p> <p>1) Analyze the potential for SIGINT against al-Qaeda. Identify at least three types of targets, associated collection mechanisms, and expected intelligence "take" from these collection mechanisms.</p> <p>-or-</p> <p>2) How will Signals Intelligence be used in the 21st Century? Identify a principle nation-state target for SIGINT collection and discuss the potential role for SIGINT in strategic and tactical intelligence collection.</p>

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8	Week Topic		*NO Readings this week. This is Reflection week.	<p>Forum Post 8:</p> <p>Welcome to the end of the course. You must complete this Discussion Board posting in order to receive a grade on your final paper.</p> <p>This discussion board submission <u>will not be graded</u>, but instead is intended to allow you to reflect on what you enjoyed about the course and what you think would improve the course for future students. Please list 5 key lessons learned and 2 areas that you'd like to learn more about.</p> <p>Final Writing Assignment – 6 page essay</p>

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Policies

Please see the [Student Handbook](#) to reference all University policies. Quick links to frequently asked question about policies are listed below.

- [Drop/Withdrawal Policy](#)
- [Plagiarism Policy](#)
- [Extension Process and Policy](#)
- [Disability Accommodations](#)

Citation and Reference Style

Attention Please: Students will follow the Turabian/Chicago Style as the sole citation and reference style used in written work submitted as part of coursework to the University.

See <http://www.apus.edu/Online-Library/tutorials/chicago.htm>.

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Late Assignments

Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals, I understand you must manage competing demands on your time. Should you need additional time to complete an assignment, please contact me before the due date so we can discuss the situation and determine an acceptable resolution. Routine submission of late assignments is unacceptable and may result in points deducted from your final course grade.

Deductions:

Late forum posts can be penalized up to 5 points per day

Netiquette

Online universities promote the advancement of knowledge through positive and constructive debate – both inside and outside the classroom. Forums on the Internet, however, can occasionally degenerate into needless insults and “flaming.” Such activity and the loss of good manners are not acceptable in a university setting – basic academic rules of good behavior and proper “Netiquette” must persist. Remember that you are in a place for the rewards and excitement of learning which does not include descent to personal attacks or student attempts to stifle the Forum of others.

- **Technology Limitations:** While you should feel free to explore the full-range of creative composition in your formal papers, keep e-mail layouts simple. The Sakai classroom may not fully support MIME or HTML encoded messages, which means that bold face, italics, underlining, and a variety of color-coding or other visual effects will not translate in your e-mail messages.
- **Humor Note:** Despite the best of intentions, jokes and especially satire can easily get lost or taken seriously. If you feel the need for humor, you may wish to add “emoticons” to help alert your readers: ;-), :), ☺

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Online Library

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The Online Library is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Online Library provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to librarian@apus.edu.

- **Charles Town Library and Inter Library Loan:** The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- **Electronic Books:** You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.
- **Electronic Journals:** The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.
- **Tutor.com:** AMU and APU Civilian & Coast Guard students are eligible for 10 free hours of tutoring provided by APUS. Tutor.com connects you with a professional tutor online 24/7 to provide help with assignments, studying, test prep, resume writing, and more. Tutor.com is tutoring the way it was meant to be. You get expert tutoring whenever you need help, and you work one-to-one with your tutor in your online classroom on your specific problem until it is done.

Request a Library Guide for your course

(<http://apus.libguides.com/index.php>)

The AMU/APU Library Guides provide access to collections of trusted sites on the Open Web and licensed resources on the Deep Web. The following are specially tailored for academic research at APUS:

- Program Portals contain topical and methodological resources to help launch general research in the degree program. To locate, search by department name, or navigate by school.
- Course Lib-Guides narrow the focus to relevant resources for the corresponding course. To locate, search by class code (e.g., SOCI111), or class name.

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If a guide you need is not available yet, please email the APUS Library:
librarian@apus.edu.

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